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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Alexandre Bronstein

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HEWLETT-PACKARD COMPANY

Intellectual Property Administration

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EXAMINER

WILLIAMS JR, RONALD E

ART UNIT

PAPER NUMBER

2121

DATE MAILED: 02/15/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.		Applicant(s)	
	09/882,581		BRONSTEIN ET AL.	
	Examiner		Art Unit	
	Ronald E. Williams		2121	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 June 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-17 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 14 June 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>4/18/2001</u> | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This Office Action is responsive to application filed on June 14, 2001.
2. Claims 1-17 have been examined.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-17 are rejected under 35 U.S.C. 102(b) as being anticipated by Cynthia Hood et al. (Intelligent Detection For Fault Management of Communication Networks)

Regarding Claim 1:

A health assessor for assessing health of a target element within a multi-element system, comprising:

a plurality of sensors, each being operatively coupled to the target element to produce a measure of the target element; **(see pg 16, Figure 3.1)**

a plurality of measure collectors, each collecting a measure from one of the sensors, wherein each of the collectors also stores the measure as historical measure; **(see pg 16, lines 1-3. “the architecture consists of a centralized network manager along with many agents. the agents reside in the various network nodes and collect data.”)**

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a plurality of evaluators, each evaluating at least a subset of all the measures collected by the measure collectors in accordance with a pre-configured evaluation definition for the respective evaluator to provide an assessment; **(see pg 5-6, 1.2.1 Observation Processing and Figure 1.1-1.2)**

a probabilistic reasoning network coupled to the evaluators to receive the assessment from each of the evaluators and to analyze all the assessments in accordance with a pre-configured reasoning definition so as to provide an overall probabilistic health assessment of the target element. **(see pg 6, 1.2.2 Combination of Information, lines 1-6 and Figure 1.3)**

Regarding Claim 2:

The health assessor of claim 1, wherein the evaluation definition of an evaluator determines which of the measures collected by all of the measure collectors are to be received by the respective evaluator. **(see pg 5, 1.2.1 Observation Processing, lines 3-9 to pg 6 line 1. “within each segment of data, we are interested in capturing the information pertinent to the detection problem. this is the responsibility of the feature extraction component.”)**

Regarding Claim 3:

The health assessor of claim 1, wherein each of the evaluators further comprises:
an evaluation definition store that stores the pre-configured evaluation definition of the evaluator; **(see pg 17, lines 12-17)** an evaluation module coupled to the evaluation

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definition store to provide the assessment by statistically comparing the subset of the measures and the historical measures based on the predefined evaluation definition.

(see pg 5-6, 1.2.1 Observation Processing and 1.2.2 Combination of Information)

Regarding Claim 4:

The health assessor of claim 3, wherein the operation of an evaluator can be changed by replacing the pre-configured evaluation definition for that evaluator with a new evaluation definition. **(see pg 33 Figure 4.3 and pg 34, lines 1-11, Figure 4.4 and see pg 61, lines 13-20 to pg 62 lines 1-2. “in our experiments we set $p(\text{Network} = \text{normal}) = 0.9$, $p(\text{nf}=\text{normal}/\text{network} = \text{normal}) = 0.8$ and $p(\text{nf}=\text{normal}/\text{network} = \text{abnormal}) = 0.2$.” Examiner notes that these threshold values could be not only be set at any value, but also they could be reset/changed at any time which anticipates replacing the pre-configured reasoning definition with a new reasoning definition claimed by applicant.)**

Regarding Claim 5:

The health assessor of claim 1, wherein the reasoning network is a Bayesian network probabilistic reasoning network. **(see pg 6, 1.2.2 Combination of Information, lines 1-6 and Figure 1.3)**

Regarding Claim 6:

The health assessor of claim 1, wherein the overall health assessment of the target

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element is the probability indicating that the target element is healthy. (see pg 39, 4.3.2

Study of Features, lines 1-2. “our goal is to extract information that will help us determine whether the behavior of the MIB variable is normal or abnormal.” and see pg 61, lines 13-20 to pg 62, lines 1-2)

Regarding Claim 7:

The health assessor of claim 5, wherein the probabilistic reasoning network further comprises a reasoning definition store that stores the pre-configured reasoning definition, wherein the pre-configured reasoning definition defines how the probabilistic reasoning network should analyze all the assessments received from the evaluators to produce the overall health assessment of the target element. (see pg 33 Figure 4.3 and pg 34, lines 1-11, Figure 4.4 and pg 45, lines 2-5 and pg 46, lines 1-8)

Regarding Claim 8:

The health assessor of claim 7, wherein the operation of the probabilistic reasoning network can be changed by replacing the pre-configured reasoning definition with a new reasoning definition. (see pg 33 Figure 4.3 and pg 34, lines 1-11, Figure 4.4 and see pg 61, lines 13-20 to pg 62 lines 1-2. “in our experiments we set $p(\text{Network} = \text{normal}) = 0.9$, $p(\text{nf}=\text{normal}/\text{network} = \text{normal}) = 0.8$ and $p(\text{nf}=\text{normal}/\text{network} = \text{abnormal}) = 0.2$.” Examiner notes that these threshold values could be not only be set at any value, but also they could be reset/changed at any time which anticipates replacing the pre-configured reasoning definition with a new

reasoning definition claimed by applicant.)

Regarding Claim 9:

A health assessment system for assessing health of an element within a multi-element system, comprising:

a health assessment engine that receives measures of the target element and provides health assessment of the target element based on the measures and historical measures of the target element, wherein the historical measures have already been stored in the health assessment engine; **(see pg 19, lines 6-9. "SNMP also provides a protocol for communication between the agents and the network manager. this protocol allows the manager to query the MIB for current information, change information in the MIB, and receive notification of certain events occurring at the agent.")**

a result formatting module that formats the health assessment into a report; **(see pg 24, lines 1-7)**

a web interface that transmits the formatted report to a remote access system via the Internet. **(see pg 17, lines 1-7 and see pg 24 lines 1-7)**

Regarding Claim 10:

The health assessment system of claim 9, wherein the health assessment engine further comprises:

a plurality of sensors, each being operatively coupled to the target element to produce a measure of the target element; **(see pg 16, Figure 3.1)**

a plurality of measure collectors, each collecting a measure from one of the sensors, wherein each of the collectors also stores the measure as historical measure; **(see pg 16, lines 1-3. “the architecture consists of a centralized network manager along with many agents. the agents reside in the various network nodes and collect data.”)**

a plurality of evaluators, each evaluating at least a subset of all the measures collected by the measure collectors in accordance with a (1) pre-configured evaluation definition for the respective evaluator and (2) at least a subset of all historical measures of the target element that have already been stored in the collector to provide an assessment; **(see pg 5-6, 1.2.1 Observation Processing and Figure 1.1-1.2)**

a probabilistic reasoning network coupled to the evaluators to receive the assessment from each of the evaluators and to analyze all the assessments in accordance with a pre-configured reasoning definition so as to provide an overall health assessment of the target element. **(see pg 6, 1.2.2 Combination of Information, lines 1-6 and Figure 1.3)**

Regarding Claim 11:

The health assessment system of claim 10, wherein each of the evaluators further comprises an evaluation definition store that stores the pre-configured evaluation definition of the evaluator; an evaluation module coupled to the evaluation definition

store to provide the assessment by statistically comparing the subset of the measures and the historical measures based on the predefined evaluation definition. (see pg 33 Figure 4.3 and pg 34, lines 1-11, Figure 4.4 and pg 45, lines 2-5 and pg 46, lines 1-8)

Regarding Claim 12:

The health assessment system of claim 11, wherein the operation of an evaluator can be changed by replacing the pre-configured evaluation definition for that evaluator with a new evaluation definition. (see pg 33 Figure 4.3 and pg 34, lines 1-11, Figure 4.4 and see pg 61, lines 13-20 to pg 62 lines 1-2. "in our experiments we set $p(\text{Network} = \text{normal}) = 0.9$, $p(\text{nf}=\text{normal}/\text{network} = \text{normal}) = 0.8$ and $p(\text{nf}=\text{normal}/\text{network} = \text{abnormal}) = 0.2$." Examiner notes that these threshold values could be not only be set at any value, but also they could be reset/changed at any time which anticipates replacing the pre-configured reasoning definition with a new reasoning definition claimed by applicant.)

Regarding Claim 13:

The health assessment system of claim 10, wherein the reasoning network is a Bayesian network probabilistic reasoning network. (see pg 6, 1.2.2 Combination of Information, lines 1-6 and Figure 1.3)

Regarding Claim 14:

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The health assessment system of claim 13, wherein the probabilistic reasoning network further comprises a reasoning definition store that stores the pre-configured reasoning definition, wherein the pre-configured reasoning definition defines how the probabilistic reasoning network should analyze all the assessments received from the evaluators to produce the overall health assessment of the target element. **(see pg 33 Figure 4.3 and pg 34, lines 1-11, Figure 4.4 and pg 45, lines 2-5 and pg 46, lines 1-8)**

Regarding Claim 15:

The health assessment system of claim 14, wherein the operation of the probabilistic reasoning network can be changed by replacing the pre-configured reasoning definition with a new reasoning definition. **(see pg 33 Figure 4.3 and pg 34, lines 1-11, Figure 4.4 and see pg 61, lines 13-20 to pg 62 lines 1-2. “in our experiments we set $p(\text{Network} = \text{normal}) = 0.9$, $p(\text{nf}=\text{normal}/\text{network} = \text{normal}) = 0.8$ and $p(\text{nf}=\text{normal}/\text{network} = \text{abnormal}) = 0.2$.” Examiner notes that these threshold values could be not only be set at any value, but also they could be reset/changed at any time which anticipates replacing the pre-configured reasoning definition with a new reasoning definition claimed by applicant.)**

Regarding Claim 16:

The health assessment system of claim 10, wherein the remote access system is the target element. **(see Figure 3.1. Hood discloses in this figure a router to another network with a workstation with an agent connected anticipating the remote**

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access system being the target element claimed by applicant.)

Regarding Claim 17:

The health assessment system of claim 10, wherein the remote access system is a remote access terminal or an application. **(see Figure 3.1. Hood discloses in this figure a router to another network with a workstation and agent connected together which is the remote access terminal claimed by applicant.)**

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ronald E. Williams whose telephone number is 571 272 2590. The examiner can normally be reached on MWF 7-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Anthony Knight can be reached on 571 272 3687. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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A handwritten signature in black ink, appearing to read 'Anthony Knight', is written over the printed name.

Anthony Knight
Supervising Patent Examiner
Tech Center 2100

RW